Ludovica Schaerf

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📍 Route de Praz-Véguey, 29
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Education

Sept. 2020 - July 2022

Masters of Science in Digital Humanities (120 ECTS), *Ecole Polytechnique Fédérale de Lausanne (EPFL)*, Ecublens, Switzerland, Current GPA: 5.75/6.0

Relevant courses: Artificial Neural Networks, Applied Data Analysis, Machine Learning for Digital Humanities, Distributed Information Systems, Image and Video Processing

Sept. 2017 - July 2020

Bachelor of Science in Informatics (180 ECTS), *Amsterdam University College (AUC)*, Amsterdam, Netherlands, GPA: 3.95/4.00, Summa Cum Laude.

Relevant courses: Text Mining and Collective Intelligence, Databases, Modelling Real-World Problems, Data Structures and Algorithms

Sept. 2012 - July 2017

High School Diploma, *Liceo Classico E.Q. Visconti*, Rome, Italy, Grade at Esame di Stato: 100/100

Honours and Awards

Sept. 2020

MS Excellence Fellowship, granted to outstanding students in their section *at EPFL*.

August 2020

BS Thesis Distinction, granted by the Capstone Awards Committee of the university to high performing theses *at AUC*.

July 2020

BS Summa Laurea Cum Laude.
Candidate for Valedictorian as among highest 16 GPAs of *Amsterdam University College*'s 2020 grade.

Scholarship Federico de Vita, at *Liceo Classico E.Q. Visconti*,
Awarded for placing 1ˢᵗ at the internal standardized mathematics competition 'Giochi di Archimede'.

Work and Academic Experiences

Feb. 2022- July 2022

Master Thesis at Digital Humanities Lab (DHLab)
📍 *EPFL*, Ecublens, Switzerland,
👤 Prof. Frederic Kaplan,

Description: Topological data analysis on the Cini Foundation Photographic Archive. Use of computer vision models (EfficientNET, RegNET) for the creation of an embedding space representation of photos of classical paintings based on shared distinctive features (i.e. same pose of the hand). Use of the Mapper algorithm to create a topological representation of the space.

Sept. 2021 - January 2022

Student Assistant at 'Applied Data Analysis' MSc Course
📍 *EPFL*, Ecublens, Switzerland,
👤 Prof. Bob West,

Description: Supervision and grading of student projects tackling data science problems. Revision of the course's assignments and grading of the students' submissions. The course has 500+ students.

July 2021 - January 2022

Data Science for Digital Humanities Internship at Peter Lang Publishing Group
📍 *Peter Lang AG*, Lausanne, Switzerland,
👤 Daniela Toma (project manager),

Description: Data processing and extraction, using deep learning models with BERT (TensorFlow hub), complex regular expressions (re), content-based recommendation systems (bigram TFIDF and cosine similarity), text summarization based on sentence similarity graphs and PageRank (networkx), multilingual natural language processing techniques (spacy). Set up of Elasticsearch 7.14 NoSQL database. Web development: website backend in PHP, and front-end with HTML5, CSS, Bootstrap5, JavaScript, jQuery. Interactive visualizations using Leaflet, D3, Charts.js, Google charts, wordcloud2. Design curation, special attention to UX. The final product is a [dissemination platform for social science and humanities books](), offering improved search and filtering tools, and interactive visualizations.

Sept. 2019 - August 2020

Data Science Internship at Machine Learning Programs (MLP)

📍 *Machine Learning Programs*, Amsterdam, Netherlands,
👤 Prof. Breanndán ó Nualláin,

Description: Python-based machine learning and data science programs to investigate insurer and broker behaviours. Set up the company's PostgreSQL database for optimized querying of historic data summaries. Machine learning and deep learning regression models (sklearn, Tensorflow, PyTorch). Creation of an internal visualization toolkit for the ML models.

June 2020

Student Assistant at 'Machine Learning Programs' BSc Intensive Course
📍 *Machine Learning Programs & Amsterdam University College*, Amsterdam, Netherlands,
👤 Prof. Breanndán ó Nualláin,

Description: Assistance to students in carrying out a project in data science and deep learning for insurance price regression.

Jan. 2020

Deep Learning Internship at ALCOR Lab
📍 *Sapienza University of Rome*, Rome, Italy
👤 Prof. Fiora Pirri,

Description: Work with a research group on computer vision using deep learning techniques. Focus on the study of autoencoders and generative models (VAE, GANs).

Sept. 2018 - June 2020

Volleyball Trainer
📍 *UvO Amsterdam*, Amsterdam, Netherlands

Description: Trainer of an adult team of 12-18 members, organizing tailored practices for all levels, tournaments and matches with other Amsterdam based teams.

Sept. 2018 - July 2019

Member of the Audit Commission
📍 *Audit Commission*, Amsterdam University College

Description: Member of the Audit team that checks upon finances and expenditures of the university's student association.

Dec. 2019

Symposium Co-Organizer
📍 *Big Data Symposium: Private vs Public*, Amsterdam, Netherlands

Description: Programme organizer and moderator of the panel on 'IoT Surveillance', with speakers from the Amsterdam Police Department, the University of Amsterdam, Huawei, and others.

Technological Skills

Programming Python, PHP, Matlab, R, C, Haskell
Machine Learning and Deep Learning Pytorch, Tensorflow, Sklearn, NLTK, Spacy, Scipy
Databases PostgreSQL, Elasticsearch (NoSQL)
Web-design Javascript, d3.js, Three.js, Leaflet.js, CSS, Bootstrap, HTML5
Miscellaneous Git, Latex, Figma, Microsoft Office (Excel)

Interests

General Volleyball, Bouldering, Yoga, Skiing, Food
Cultural Classical Arts and Literature, Modern and Contemporary Arts,
Philosophy (of Metaphysics), Design

Languages

Italian Native Speaker
English C.2 level
Dutch B.1 level
French B.1 level